

PREDICTIVE VALUE OF CURRENT CIGARETTE SMOKING,
PACK YEARS AND TAR EXPOSURE IN THE ESTIMATION
OF LUNG CANCER RISK², J Virtamo¹, PR Taylor²,

JK Huttunen¹, BK Edwards², P Järvinen¹, J Haapakoski¹,
A Hartman², J Haukka¹, OP Heinonen¹, D Albanes² and
P Greenwald².

¹National Public Health Institute, Helsinki, Finland
and ²National Cancer Institute, Bethesda,
Maryland, USA.

Now that the use of 'light' cigarettes is well-established, is there predictive value in including tar exposures in lung cancer risk estimations?

Over 29,000 smoking men aged 50-69 years were recruited in the ATBC Study, a double-blind, placebo-controlled trial aimed at preventing lung cancer with alpha-tocopherol and beta-carotene. Smoking was recorded at baseline. 475 men have had lung cancer in 3-6 years of follow-up.

The risk increased 1.8-fold (relative risk, RR = 1.8) with the number of daily cigarettes, from 14 or less to 30 or more. Daily tar exposure from cigarettes had a similar association. Pack years had a positive linear association with lung cancer risk; RR was 4.0 in the highest quintile compared to the lowest (the incidence of lung cancer in quintiles was 29, 22, 15, 12 and 7 per 1000, respectively). The lifetime tar exposure based on the tar content of the current brand was not superior to pack years in predicting lung cancer; RR was 3.6 in the highest quintile compared to the lowest. Thus taking into account the tar content of the current brand does not improve the estimation of lung cancer risk compared to the conventional smoking information.

THE PROBLEM OF THE FUTURE. THE DISCREPANCY BETWEEN
NUMBERS OF NEW CANCERS TOTALLY, LUNG CANCER ES-
PECIALLY AND THE SOCIETY AS A WHOLE IN YEAR 2010.

S.HAGEN, ULLEVAL HOSPITAL, OSLO, NORWAY.

Norway with a stable uniform population, a Cancer Register which for years have picked up all new cancers and a Bureau of Statistics keeping an eye on everyone, will be used to demonstrate what we all at least in the western world, as soon as possible, should be aware of about the coming 20 years and take precautions if possible. The population as a whole will increase slowly, in year 2010 around + 8%. The agegroup 20-39 years will be reduced by around 8%. Those 80 years and older and especially those 85+ years increase dramatically. The implications of these predictable changes in the population have huge consequences for the numbers of cancer patients, totally 50% increase. The babyboom from the fifties, those 40-69 years, will really be hit giving that agegroup 70% more cancers. In numbers this means for each 10 new cancers in 1990 you will have 7 more in 2010. Of those age 80+ the increase is 79% related to 1990. Lungcancer alone shows already at year 2000 a 50% increase for the whole population.

CONCLUSION:

In 2010 the population has increased with around 8%, new cancers with 50%, 70% among those 40-69 years. For lung cancer there is a 50% increase early as in year 2000. Those recruiting around the clock care-service, those 20-39 years, have decreased by 8%.

HE KINGZHOU, CHEN HONG, CHEN WEI, R.S. CHAPMAN
INSTITUTE OF ENVIRONMENTAL HEALTH & ENGINEERING,
BEIJING, CHINA

A case-control study on risk factors of lung cancer in no-smoking woman in rural area, China

In Xuanwei County, Yunnan Province, the lung cancer mortality among females is the highest in China, and tobacco smoking rate is below 0.2%. The former studies have shown a strong association of lung cancer mortality with indoor air pollution from "smoky" coal combustion and shown an obvious on-site exposure-response relationship between lung cancer mortality and benzo[a]pyrene concentration in indoor air.

A case-control study involving interviews with 139 females lung cancer patients and 139 population based controls was conducted in 1989. The risks of lung cancer were higher among the women reporting local "smoky" coal use in their home. Hormonal factors were suggested by an increased risk associated with late menopause and with shorter menstrual cycle length. Factors such as history of chronic bronchitis and family history of lung cancer could increase the risks of contracting lung cancer, but no positive association of lung cancer and passive smoking was found in this study.

The occupational distribution of mortality of lung cancer in Shijiazhuang

Hou Jun, Yang Fengming, Zong Xiuhui and Zhang Wenzhi
Cancer Institute Hebei, Hospital of Hebei Province

The mortality of lung cancer in the population of 2,423,057 was analysed in Shijiazhuang from 1974 to 1976. Among the male population, the mortality in worker, peasant, citizen and country employee was $32.68/10^5$ (relative risk=2.36), $4.57/10^5$ (RR=0.33), $0.28/10^5$ (RR=0.02) and $21.73/10^5$ (RR=1.57), respectively. Among the female, the mortality in country employee, peasant, citizen and worker was $14.51/10^5$ (RR=1.39), $5.32/10^5$ (RR=0.51), $4.07/10^5$ (RR=0.39) and $3.76/10^5$ (RR=0.36), respectively. During the man worker group, the mortality of commercial employee was $30.72/10^5$ (RR=2.22) and the highest, and of the other people going in for mine, traffic or postal, textile and chemical was $5.81/10^5$ (RR=0.42), $2.21/10^5$ (RR=0.16), $0.55/10^5$ (RR=0.04) and $3.32/10^5$ (RR=0.24), respectively. The highest mortality of the chemical was $6.47/10^5$ (RR=0.62) among female worker, and of the person going in for textile, commercial was $0.52/10^5$ (RR=0.05), $3.76/10^5$ (RR=0.36).